



Huiles essentielles utilisées en thalassothérapie. Assurance qualité et cadre juridique

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Thalassotherapy

Thalassotherapy, from the Greek word thalassa, meaning "sea", is the employment of sea water,

and in general of all the things that are related to the sea environment such as sand, sun, seaweeds, mud, etc.

as a form of therapy for medical purposes.

Thalassotherapy



The therapy is applied in various forms:

as either showers of warmed seawater

application of marine mud

or of algae paste

or the inhalation of sea fog.

Thalassotherapy



The trace elements

- magnesium,
- potassium,
- calcium,
- sodium,
- iodide and many others

that are found in seawater are believed to be absorbed through the skin and exert the therapeutic activity of the thalassotherapy.

Aromatherapy

In the aromatherapy, volatile plant materials, known

- as essential oils,
- and other aromatic compounds

are used for changing

- mood,
- cognitive function,
- health,
- for treating diseases or
- for implementing the wellbeing of the people.

Aromatherapy

The effectiveness of aromatherapy is not yet full proven

even though some little evidence exists that essential oils may have therapeutic activity.

Aromatherapy and Thalassotherapy

In thalassotherapy, the essential oils are currently used for strengthening the activity of the substances related to the sea world without adding any chemical compound .

For this reason, the essential oils are employed mainly for cosmetic purposes, for therapy and for implementing the general wellbeing.

Aromatherapy and Thalassotherapy

For this reason is very important that producers and scientists implement, from one side, the quality of the products

and, from the other side, the quality of the clinical trials for the demonstration of efficacy.

Today the indications for the use of essential oils are, for the most part, related to folk references.

Aromatherapy and Thalassotherapy

The vapors may be administered by

inhalers

steam kettles

fragrant ointments

lozenges to be sucked

or strongly aromatic
sugarless chewing gum.

Aromatherapy and Thalassotherapy

Essential oil	Effects
Juniper and Agathosma	diuretic effects
Camphor oil	rubefacient irritation at first, and then counterirritant numbness
Menthol	produce a feeling of cold followed by a sense of burning. This is caused by its effect on heat-sensing nerve endings
Clove oil or eugenol	popular for many years in dentistry as antiseptics and local anesthetics
Thymol	antiseptic effects

Legal status



In Italy, the legal status of essential oils completely reflects the use that is done of these substances in general and specifically in thalassotherapy.



The essential oils are used as substances with cosmetic activity, as aromas for the food and as phytotherapeutic drugs for the health and wellbeing.



For these reasons, many (82) essential oils are included in the below list that is named INCI (International Nomenclature Cosmetic Ingredients).

International Nomenclature Cosmetic Ingredients

Botanical name	Part plant used	References for allowed effects
CARUM CARVI OIL	Carum Carvi Oil is the volatile oil distilled from the dried, ripe fruit of the caraway, <i>Carum carvi</i> , Apiaceae	Solvent
CINNAMOMUM CASSIA OIL	Cinnamomum Cassia Oil is the volatile oil obtained by steam distillation from the leaves and twigs of <i>Cinnamomum cassia</i> , Lauraceae	Oral care/masking/hair conditioning
CITRUS AURANTIFOLIA OIL	Citrus Aurantifolia Oil is the volatile oil obtained from the fruits of <i>Citrus aurantifolia</i> , Rutaceae	Skin conditioning/hair conditioning/tonic/cleansing
CITRUS AURANTIUM AMARA FLOWER DISTILLATE	Citrus Aurantium Amara Flower Distillate is an aqueous solution containing volatile oils obtained by the distillation of the flowers of <i>Citrus aurantium amara</i> , Rutaceae	Refreshing
CITRUS AURANTIUM BERGAMIA OIL	Citrus Aurantium Bergamia Oil is the psoralen-free volatile oil obtained from the fruit of <i>Citrus aurantium bergamia</i> , Rutaceae	Masking
CITRUS AURANTIUM DULCIS FLOWER OIL	Citrus Aurantium Dulcis Flower Oil is the volatile oil obtained from the flowers of the orange tree, <i>Citrus aurantium dulcis</i> , Rutaceae	Astringent/tonic

International Nomenclature Cosmetic Ingredients

Botanical name	Part plant used	References for allowed effects
CYMBOPOGON NARDUS OIL	Cymbopogon Nardus Oil is the essential oil obtained by direct steam-distillation of the dried fresh grass citronella, Cymbopogon nardus, Gramineae	Tonic
EUCALYPTUS CITRIODORAE OIL	Eucalyptus Citriodora Oil is the volatile oil obtained from Eucalyptus citriodora, Myrtaceae	Tonic/masking
JASMINUM OFFICINALE OIL	Jasminum Officinale Oil is the volatile oil obtained from the flowers of the jasmine, Jasminum officinale, Oleaceae	skin conditioning/moisturising/soothing/masking
LAVANDULA ANGUSTIFOLIA OIL	Lavandula Angustifolia Oil is the volatile oil obtained from the flowers of Lavandula officinalis, Labiatae	Tonic/masking
MYRTUS COMMUNIS OIL	Myrtus Communis Oil is a volatile oil obtained from the leaves of the myrtle, Myrtus communis, Myrtaceae	tonic/masking
THYMUS VULGARIS OIL	Thymus Vulgaris Oil is the volatile oil obtained from the flowers and leaves of the thyme, Thymus vulgaris, Labiatae	Tonic/masking
ZINGIBER OFFICINALE OIL	Zingiber Officinale Oil is the volatile oil obtained from the dried rhizomes of the ginger, Zingiber officinale, Zingiberaceae	Tonic/masking

Essential Oils - Foodstuffs

essential oils

directive
2002/46/EC

food
supplements

«foodstuffs the purpose of which is to supplement the normal diet and which are concentrated sources of nutrients or other substances with a nutritional or physiological effect, alone or in combination, marketed in dose form, namely forms as capsules, pastilles, tablets, pills and other similar forms, [...] designed to be taken in measured small unit quantities».

Nutrients - Botanicals



Along the Italian interpretation in the food supplements must be included either the nutrients either the botanicals and between these must be included the essential oils.



So we can say that today in Italy the EC harmonization process is in progress only for vitamins and minerals, while for the use of botanical substances we have a national legislation

Food supplements and herbal ingredients

Today about the fifty percent of the new notified food supplements contain only herbal ingredients, because essentially are botanicals.

The aim of this legislation is

- to ensure an high level of protection for consumers and facilitate the choice with full comprehension of the potential benefits related to the use of botanicals.

For this scope in the list of the products allowed are underlined the effects that may be declared and that the consumers can probably expect with the assumption of that drug.

Annex 1

The Italian decree contains in the Annex 1 the list of the herbal products and also of the essential oils that are admitted to the market.

Every substance must be precisely defined by:

- the common name,
- followed by the botanical name according to the binomial system (Genus, Species, variety and author)
- and the part plant used.

Medical plant

Botanical name	Part plant used	References for allowed effects
Ginkgo biloba L.	folium	Folium: Antioxidant. Memory and cognitive functions. Normal blood circulation. Function of microcirculation.

Additional warning:

If you are taking anticoagulant or drugs against platelet aggregation, consult your physician before using the product. Use of product during pregnancy and lactation is not advised.

Justification of the warning:

The extract of Ginkgo biloba L. can cause spontaneous bleeding. The anticoagulant activity is more evident in association with aspirin and / or anticoagulants or drugs interfering with the process of coagulation: eg. warfarin, ticlopidine, clopidogrel, dipyridamole.

Essential oil

Botanical name	Part plant used	References for allowed effects
CITRUS AURANTIUM L. subsp. AMARA	fructus	fructus: digestive function. Elimination of intestinal gas.
	pericarpium fructus immaturi	pericarpium fructus immaturi: control of body weight. Action on general metabolism and on lipidic metabolism. Digestive function. Control of gastrointestinal motility.
	Flos, oleum ex floribus,	flos, oleum ex floribus (Neroli): relax and improvement of mind wellbeing. Digestive function. Elimination of intestinal gas.

Additional warning:

Justification of the warning:

For fructus, fructus immaturi pericarpium and oleum: avoid the use of this product during the pregnancy, during the breast feeding and in the children under twelve years old. Ask the doctor's advice if you have cardiovascular problems. On the label must be indicated the Synephrine's titulation. Avoid the assumption of more of 30 mg/die, corresponding to about 800 mg of Citrus aurantium, at 4% of Synephrine.

Synephrine can have dangerous effects on the cardiovascular system.

Annex 1 bis

In another annex, Annex 1 bis,

are listed the herbal substances and herbal preparations

that are not allowed for the use in food supplements or

in other foodstuffs,

with the indication of botanical name and of the part of the medical plant.

HERBS NOT ALLOWED IN FOOD SUPPLEMENTS

ACONITUM ANTHORA L. fiore, pianta erbacea, radice

ACONITUM CHASMANTHUM STAP. radice

ACONITUM FEROX WALL. radice

ACONITUM HETEROPHYLLUM WALL. pianta erbacea, radice

ACONITUM NAPELLUS L. foglia, pianta erbacea, radice, tubero

ACONITUM VARIEGATUM L. radice

AMMI VISNAGA LAMK frutto, pianta erbacea con frutti, succo delle foglie

ANACARDIUM OCCIDENTALE L. pericarpo

ARISTOLOCHIA CLEMATITIS L. pianta erbacea, radice, rizoma

ARISTOLOCHIA CYMBIFERA M.-Z. foglia, radice

ARISTOLOCHIA DEBILIS SIEB-Z radice, rizoma

ARISTOLOCHIA INDICA L. radice

ARISTOLOCHIA LONGA L. radice, rizoma

ARISTOLOCHIA PISTOLOCHIA L. rizoma

ARISTOLOCHIA RETICULATA NUTT. rizoma

ARISTOLOCHIA ROTUNDA L. rizoma

ARISTOLOCHIA SERPENTARIA L. radice, rizoma

ATROPA ACUMINATA ROYLE-LINDL. foglia, pianta erbacea con fiori, radice

ATROPA BELLADONNA L. fiore, foglia, frutto, pianta erbacea, radice

COLCHICUM AUTUMNALE AUCT. NON L. bulbo, fiore, seme

COLCHICUM LUTEUM BAKER bulbo, seme

COLCHICUM NEAPOLITANUM TENOR bulbo, seme

COLCHICUM VARIEGATUM L. bulbo, seme

CORYNANTHE YOHIMBE SCHUM. corteccia

HERBS NOT ALLOWED IN FOOD SUPPLEMENTS

CROTON TIGLIUM L. olio, seme

DATURA INNOXIA MILL. foglia, seme, sommità

DATURA METEL AUCT. NON L. foglia, seme, sommità

DATURA SANGUINEA R. ET P. foglia, sommità

DATURA STRAMONIUM L. foglia, seme, sommità

DIGITALIS GRANDIFLORA MILL. fiore, foglia, seme

DIGITALIS LANATA EHRH. fiore, foglia, seme

DIGITALIS LUTEA L. fiore, foglia, seme

DIGITALIS PURPUREA L. fiore, foglia, seme

EPHEDRA DISTACHYA L. ramoscello

EPHEDRA EQUISETINA BUNGE ramoscello

EPHEDRA INTERMEDIA SCHRENK-M. pianta erbacea, steli

EPHEDRA MAJOR HOST. pianta erbacea, steli

EPHEDRA NEVADENSIS WATS. foglia, steli

EPHEDRA SINICA STAPF pianta erbacea, steli

GELSEMIUM SEMPERVIRENS AIT. F. radice, rizoma

LIGUSTRUM VULGARE L. corteccia, foglia

LOBELIA INFLATA L. foglia, pianta erbacea con fiori, seme

LOBELIA NICOTIANAEOFOLIA HEY. foglia

LOBELIA SYPHILITICA L. radice

PAPAVER BRACTEATUM LINDL. frutto immaturo

PAPAVER SOMNIFERUM L. foglia, frutto immaturo, lattice

PRUNUS AMIGDALUS BATSCH VAR. AMARA seme

RAUVOLFIA SERPENTINA BENTH. radice

RAUVOLFIA TETRAPHYLLA L. corteccia delle radici, radice

RAUVOLFIA VOMITORIA AFZ. corteccia delle radici, radice

SALVIA DIVINORUM EPLING & JATIVA

SENECIO AUREUS L. foglia, pianta erbacea

SENECIO CINERARIA DC pianta erbacea, succo

SENECIO JACOBAEA L. foglia, pianta erbacea

SENECIO NEMORENSIS foglia, pianta erbacea

SENECIO VULGARIS L. foglia, pianta erbacea

STROPHANTHUS HISPIDUS DC. seme

STROPHANTHUS KOMBE OLIV. seme

STRYCHNOS COLUBRINA L. legno

STRYCHNOS IGNATII BERG. seme

STRYCHNOS MALACCENSIS BENTH. corteccia

STRYCHNOS NUX-VOMICA L. corteccia, seme

STRYCHNOS TOXIFERA SCHOMB. corteccia

THUJA OCCIDENTALIS L. corteccia, foglia, pianta erbacea, legno, sommità

THUJA PLICATA D. DON. legno

Quality, safety and efficacy

The first activity for guarantee a good quality of essential oils is a sequence of analysis that are requested for the individualization of the essential oil as of its quality and safety.

Many of these analysis are very similar to those that are requested usually for the licensing of an herbal drug in general.

Quality, safety and efficacy

Herbal component:

- botanical name
- origin of the plant
- origin of the raw material used in the product
- part of plant used
- type of preparation used
- active constituents of the plant and relative title
- biological marker
- physiological purposes/claims
- toxicological data
- contaminants
- contraindications, notices, interactions
- possible particular notes

Finished product:

- composition of the finished product, included possible components necessary for technological reasons
- physical-chemical properties of the constituents (stability)
- indication and concentration of characterising substances (indication also of the analytical method) as well as markers guaranteeing the natural origin
- use and foreseen effect on health
- suitability of the recommended intake
- evaluation of possible interference effects, when present several herbal constituents
- indication of possible constituents responsible of adverse reactions or in any case toxicological relevant and their concentrations
- storage conditions
- shelf-life

Quality, safety and efficacy

Information on purity should consider (all or in part, according to the origin of the plant, cultivation conditions):

- mycotoxins (eg:aflatoxins, ochratoxin A)
- pesticides
- heavy metals (eg:Cd, Pb, As, Hg)
- residual solvents
- microbiological profile (eg:Salmonella spp, L. monocytogenes)
- irradiation
- organic contaminants

Quality, safety and efficacy



Usually for analyzing the compounds and testing the purity of a particular oil,



or separating the different components of a mixture (the relative amounts of such components can also be determined),



a gas chromatography (GC) analysis it's employed.



The allergenic components are identified during gas chromatography (GC).



Quality, safety and efficacy

Various essential oils have been used medicinally at different periods in history.

Medical application proposed by those who sell medicinal oils range from skin treatments to remedies for cancer, and often are based on nothing better than historical accounts of use of essential oils for these purposes.

Claims for the efficacy of medical treatments must of course be supported by evidence.

Quality, safety and efficacy

Furthermore a second critical step in the use of essential oils for therapeutic purposes is a correct selection of the people on which we want to use them.

If may be interesting consult the older text books for much information on their use, it's not less important the consultation of databanks

in which we can find the reports of randomized clinical trials that nowadays are more and more frequently done by many researchers all over the world.

PubMed

A review of the bioactivity and potential health benefits of peppermint tea (Mentha piperita L.). McKay DL, Blumberg JB. *Phytother Res.* 2006 Aug;20(8):619-33. Review.

Preliminary observations of a novel topical oil with analgesic properties for treatment of acute and chronic pain syndromes. Pergolizzi JV, Pappagallo M, Raffa RB, Gharibo C, Phillips RB, Desjonquères S, Tabor A. *Pain Pract.* 2010 May-Jun;10(3):201-13. Epub 2010 Mar 3. Review.

Anti-inflammatory properties of curcumin, a major constituent of Curcuma longa: a review of preclinical and clinical research. Jurenka JS. *Altern Med Rev.* 2009 Jun;14(2):141-53. Review. Erratum in: *Altern Med Rev.* 2009 Sep;14(3):277.

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